

Lesson 1: Converting

Customary
Measurement
Linear

Customary Measurement: Linear

Units of measurement can be converted from one unit to another.

How to Convert	
<p><u>Multiply</u></p> <p>BIG unit \longrightarrow small unit</p> <ul style="list-style-type: none">MILE \longrightarrow feetYARD \longrightarrow feetFEET \longrightarrow inches	<p><u>Divide</u></p> <p>small unit \longrightarrow BIG unit</p> <ul style="list-style-type: none">feet \longrightarrow MILEfeet \longrightarrow YARDinches \longrightarrow FEET

Conversions	
1 ft =	12 inches
1 yd =	3 feet
1 mi =	1,760 yards 5,280 feet

Example: *A bed is 7 feet long. How many inches long is it?*

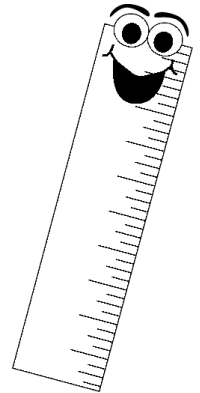
$$\begin{array}{l} 1 \text{ ft} = 12 \text{ inches} \\ 7 \text{ ft} = \underline{84} \text{ inches} \end{array}$$

For every foot, there are 12 inches.
So, multiply $7 \times 12 = 84$ inches.

Example: *A classroom is 30 feet long. How many yards long is it?*

$$\begin{array}{l} 1 \text{ yd} = 3 \text{ feet} \\ \underline{10} \text{ yd} = 30 \text{ feet} \end{array}$$

For every yard, there are 3 feet.
So, divide $30 \div 3 = 10$ yards.



Convert.

1. $1 \text{ ft} = 12 \text{ in}$
 $8 \text{ ft} = \underline{\hspace{2cm}} \text{ in}$

2. $1 \text{ yd} = 3 \text{ ft}$
 $\underline{\hspace{1cm}} \text{ yd} = 24 \text{ ft}$

3. $1 \text{ mi} = 5,280 \text{ ft}$
 $2 \text{ mi} = \underline{\hspace{2cm}} \text{ ft}$

4. $6 \text{ ft} = \underline{\hspace{2cm}} \text{ in}$

5. $3 \text{ yd} = \underline{\hspace{2cm}} \text{ ft}$

6. $48 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$

7. $18 \text{ ft} = \underline{\hspace{2cm}} \text{ yd}$

Lesson 2: Converting

Customary Measurement Linear

Customary Measurement: Linear

The height of a person may be expressed as 5 feet 4 inches.
Another way to express the height of a person is 64 inches.

How did we convert that?

$$\begin{array}{ccc} 5 \text{ feet} & & 4 \text{ inches} \\ \text{convert} \downarrow 5 \times 12 & & \downarrow \text{keep the same} \\ 60 \text{ inches} & + & 4 \text{ inches} = \underline{64} \text{ centimeters} \end{array}$$

Convert.

1. 3 feet 2 inches = _____ inches

2. 10 yards 1 foot = _____ feet

3. 1 mile 200 feet = _____ feet

You can also say the length of a room is 26 feet. This can also be expressed as 8 yards 2 feet.

How did we convert that?

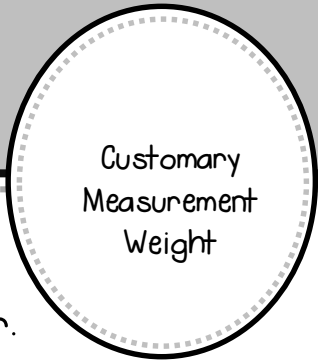
$$\begin{array}{c} \underline{26} \text{ feet} \\ \downarrow \text{For every 3 feet, there is 1 yard. So...} 26 \div 3 = 8 \text{ r } 2 \\ \underline{8} \text{ yards } \underline{2} \text{ feet} \end{array}$$

6. 50 inches = _____ feet _____ inches

7. 10 feet = _____ yards _____ feet

8. 35 feet = _____ yards _____ feet

Lesson 3: Weight



Customary Measurement: Weight

Units of measurement can be converted from one unit to another.

How to Convert	
<u>Multiply</u>	<u>Divide</u>
BIG unit → small unit	small unit → BIG unit
• TON → pound	• pound → TON
• POUND → ounce	• ounce → POUND

Conversions
1 lb = 16 oz
1 T = 2,000 lbs

Example: *A skateboard weighs 4 pounds. How many ounces does it weigh?*

1 lb = 16 oz
4 lb = <u>64</u> oz

For every pound, there are 16 ounces.
So, multiply $4 \times 16 = 64$ ounces.

Example: *If a shark weighs 4,000 pounds, how many tons does it weigh?*

1 T = 2,000 lb
<u>2</u> T = 4,000 lb

For every ton, there are 2,000 pounds.
So, divide $4,000 \div 2,000 = 2$ tons.

Convert.

- | | | |
|-----------------|--------------------|-------------------|
| 1. 1 lb = 16 oz | 2. 1 T = 2,000 lb | 3. 1 T = 2,000 lb |
| 6 lb = _____ oz | _____ T = 8,000 lb | 6 T = _____ lb |

- | | |
|-------------------|--------------------|
| 4. 8 T = _____ lb | 5. 3 lb = _____ oz |
|-------------------|--------------------|

- | | |
|-----------------------|-----------------------|
| 6. 2,000 lb = _____ T | 7. 4,000 lb = _____ T |
|-----------------------|-----------------------|



Lesson 4: Weight

Customary
Measurement
Weight

Customary Measurement: Weight

The weight of a baby may be expressed as 8 pounds 2 ounces.
Another way to express the weight of this baby is 130 ounces.

How did we convert that?

$$\begin{array}{ccc} 8 \text{ pounds} & & 2 \text{ ounces} \\ \text{convert } \downarrow 8 \times 16 & & \downarrow \text{keep the same} \\ 128 \text{ ounces} & + & 2 \text{ ounces} = \underline{130} \text{ ounces} \end{array}$$

Convert.

1. 7 tons = _____ pounds
242 pounds
2. 2 pounds = _____ ounces
9 Ounces
3. 5 tons = _____ pounds
28 pounds

You can also say the weight of a cat is 100 ounces. This can also be expressed as 6 pounds 4 ounces.

How did we convert that?

$$\begin{array}{c} \underline{100 \text{ ounces}} \\ \downarrow \text{For every 16 ounces, there is 1 pound. So... } 100 \div 16 = 6 \text{ r } 4 \\ \underline{6} \text{ pounds } \underline{4} \text{ ounces} \end{array}$$

6. 4,395 pounds = _____ tons _____ pounds
7. 70 ounces = _____ pounds _____ ounces
8. 10,500 pounds = _____ tons _____ pounds



Lesson 5: Capacity

Customary Measurement Capacity

Customary Measurement: Capacity

Units of measurement can be converted from one unit to another.

How to Convert	
<p><u>Multiply</u></p> <p>BIG unit → small unit</p> <ul style="list-style-type: none">GALLON → quartQUART → pintPINT → cupCUP → fluid ounce	<p><u>Divide</u></p> <p>small unit → BIG unit</p> <ul style="list-style-type: none">quart → GALLONpint → QUARTcup → PINTfluid ounce → CUP

Conversions	
1 c =	8 fluid ounces
1 pt =	2 cups
1 qt =	4 cups
	2 pints
1 gal =	4 quarts
	8 pints
	16 cups

Example: *A bucket has a capacity of 5 quarts. What is its capacity in pints?*

$$\begin{array}{l} 1 \text{ qt} = 2 \text{ pt} \\ 5 \text{ qt} = \underline{10} \text{ pt} \end{array}$$

For every quart, there are 2 pints.
So, multiply $5 \times 2 = 10$ pints.

Example: *If a pot has a capacity of 16 cups, how many quarts can it hold?*

$$\begin{array}{l} 1 \text{ qt} = 4 \text{ c} \\ \underline{4} \text{ qt} = 16 \text{ c} \end{array}$$

For every quart, there are 4 cups.
So, divide $16 \div 4 = 4$ quarts.

Convert.

1. $1 \text{ gal} = 4 \text{ qt}$

$6 \text{ gal} = \underline{\hspace{2cm}} \text{ qt}$

2. $1 \text{ c} = 8 \text{ fl oz}$

$\underline{\hspace{1cm}} \text{ c} = 24 \text{ fl oz}$

3. $1 \text{ qt} = 2 \text{ pt}$

$8 \text{ qt} = \underline{\hspace{2cm}} \text{ pt}$

4. $5 \text{ gal} = \underline{\hspace{3cm}} \text{ pt}$

5. $2 \text{ c} = \underline{\hspace{3cm}} \text{ fl oz}$

6. $30 \text{ c} = \underline{\hspace{3cm}} \text{ pt}$

7. $20 \text{ qt} = \underline{\hspace{3cm}} \text{ gal}$



Lesson 6: Capacity

Customary
Measurement
Capacity

Customary Measurement: Capacity

The capacity of a bucket may be expressed as 5 gallons 3 quarts. Another way to express the capacity of this bucket is 23 quarts.

How did we convert that?

$$\begin{array}{ccc} \underline{5 \text{ gallons}} & & 3 \text{ quarts} \\ \text{convert} \downarrow & & \text{keep the same} \downarrow \\ 20 \text{ quarts} & + & 3 \text{ quarts} = \underline{23} \text{ quarts} \end{array}$$

Convert.

- 3 quarts 2 cups = _____ cups
- 4 cups 3 fluid ounces = _____ fluid ounces
- 2 gallons 5 pints = _____ pints

You can also say the capacity of an orange juice pitcher is 10 cups. This can also be expressed as 2 quarts 2 cups.

How did we convert that?

$$\begin{array}{c} \underline{10 \text{ cups}} \\ \downarrow \text{For every 4 cups, there is 1 quart. So... } 10 \div 4 = 2 \text{ r}2 \\ \underline{2} \text{ quarts } \underline{2} \text{ cups} \end{array}$$

- 30 quarts = _____ gallons _____ quarts
- 70 fluid ounces = _____ cups _____ fluid ounces
- 19 cups = _____ pints _____ cups

